

**II. Rejection Under 35 U.S.C. § 102(b)**

In the Advisory Action dated September 16, 2002, the Examiner indicated that the rejection of claims 17, 18, 23-30, 32, and 34-36 under 35 U.S.C. § 102(b) in view of U.S. Patent No. 4,529,586 ("De Marco") has been withdrawn. The Applicants wish to thank the Examiner for withdrawing this rejection.

**III. Rejections under 35 U.S.C. § 103(a)**

**A. De Marco alone**

In the Advisory Action, the Examiner indicated that the rejection of claims 17-21, 23-30, and 32-36 under 35 U.S.C. § 103(a) in view of De Marco has been withdrawn. The Applicants wish to thank the Examiner for withdrawing this rejection.

**B. De Marco in view of Reich**

In the Advisory Action, the Examiner maintained the rejection of claims 17, 18, 20, 21, and 23-36 under 35 U.S.C. § 103(a) over De Marco in view of WO 94/06403 to Reich, et al. ("Reich"). Applicants respectfully traverse this rejection with respect to all pending claims for reasons of record and the following additional reasons.

The Examiner asserts that De Marco teaches a conditioner composition containing a cationic polymer and an amino silicone polymer. In addition, the Examiner contends that Reich teaches that a shampoo and conditioner together in one composition is better than a conventional conditioner alone and that the composition in Reich contains an anionic surfactant in the same ranges as claimed. The Examiner concludes that "the motivation to combine and [sic] a cleansing shampoo with a conditioner composition of De Marco comes from the teachings of Reich that the [sic]

conditioning hair while cleansing is useful and enables more manageability.” Advisory Action at 2.

First, De Marco teaches a hair conditioning composition comprising an amino functional silicone polymer in an aqueous emulsion and an effective amount of a cationic surfactant. In terms of the amino functional silicone polymer, De Marco teaches that such polymer may have a weight average molecular weight approximately between 5,000 and 100,000. See column 1, line 58-column 2, line 27. In contrast, the present claims require that the amino-functionalized silicone polymer have a weight-average molecular mass ranging from 11,000-25,000. Furthermore, the example contained in the specification of the instant application clearly demonstrates that an amino-functionalized silicone polymer within the range stated in the claims (15,000) has unexpected and markedly improved conditioning properties in comparison to a composition prepared using an amino-functionalized silicone polymer with a weight-average molecular mass that is outside the claimed range (50,000). See pages 31-33 of the specification.

The Federal Circuit has repeatedly held that claims containing a range for a parameter which overlaps or is included within a range in the prior art is obvious unless the applicant can show that the claimed range is critical, generally by showing that the claimed range achieves unexpected results relative to the prior art range. See *e.g.*, *In re Woodruff*, 16 USPQ2d 1934, 1936 (Fed. Cir. 1990), *Gardner v. TEC Sys., Inc.*, 725 F.2d 1338, 220 USPQ 777 (Fed. Cir.), *cert. denied*, 469 U.S. 830 (1984).

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Here, the example contained in the specification at pages 31-33 clearly shows that a weight-average molecular weight for the amino-functionalized silicone polymer within the claimed range of 11,000-15,000 provides unexpectedly good results in comparison to compositions that do not fall within the present claims. Furthermore, nothing in either De Marco or Reich would have motivated one of skill in the art to choose an amino-functionalized silicone polymer with a molecule mass within the range claimed. Rather, De Marco only teaches compositions containing an amino-functionalized silicone polymer with a weight-average molecular weight in the broad range of 5,000-100,000. Reich does not teach compositions containing such polymers at all. Accordingly, the compositions contained in the present claims would not have been obvious to one of skill in the art considering De Marco in view of Reich.

Second, Applicants continue to disagree that adding the copolymer of Reich, which is expressly required to have a "hair conditioning effect," to the conditioning compositions of De Marco could impart the cleansing effect that the Examiner claims serves as motivation to make the modification in the first place.

Third, Applicants maintain their position that there would not have been the requisite motivation to combine the entirety of both the composition of Reich and that of De Marco when each composition is described as beneficial and successful on its own. For example, Reich claims that the compositions disclosed therein already "provide enhanced hair conditioning benefits significantly greater than that provided by other commonly employed 'two-in-one' compositions." See page 3, lines 17-19. De Marco provides no motivation to combine the entirety of both compositions either.

Finally, Applicants wish to reemphasize their position that the specification of De Marco teaches away from the addition of anionic surfactants to the disclosed compositions. The compositions of De Marco do not contain anionic surfactants and are not detergents. De Marco does not teach or suggest the desirability of a cleansing effect or of incorporating anionic surfactants into the compositions disclosed therein. Specifically, De Marco teaches that a "further benefit of the cationic polymer derives from the discovery that upon shampooing of the hair with an anionic surfactant the cationic polymer forms *in situ* on the hair a conditioning complex which will further improve the durability of the conditioning effect to last through several shampoos." See col. 1, lines 42-47. The cationic polymer "forms a bond with the negatively charged sites of the hair" and then the "remaining free positive charges of the cationic polymer react in the presence of hair with the anionic surfactant residue from a preceding shampoo or with such a surfactant from a subsequent shampoo to form a durable conditioning complex on the hair which remains attached to the hair and conditions it." See col. 5, line 56 - col. 6, line 2.

If anionic surfactants in an amount ranging from 5 to 40% by weight, as required by the instant claims, were added to De Marco's compositions comprising a cationic polymer in an amount ranging from 0.05% to about 0.5% by weight, one of ordinary skill in the art would not have had a reasonable expectation of success. Specifically, based on the teachings of De Marco, if 5 to 40% by weight of anionic surfactants were combined with De Marco's cationic polymer, one of ordinary skill in the art would expect the cationic polymer to react with the anionic surfactant to form a complex prior to their application to hair, as opposed to forming a complex that includes the hair as in De

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Marco. Such complexation prior to application to hair could result in decreased reactivity with the hair itself, thereby resulting in less conditioning of the hair.

It is well-established that claims are not *prima facie* obvious when a reference or combination of references teaches away from the claimed invention. See, e.g., M.P.E.P. § 2141.03. Accordingly, the instant claims are not obvious over De Marco in view of Reich.

Furthermore, the addition of anionic surfactants to the compositions of De Marco in an amount required by the instant claims would change the principle of operation of the compositions disclosed in De Marco. The teachings of references do not render the claims *prima facie* obvious where the proposed modification would change the principle of operation of the prior art invention being modified. See e.g., M.P.E.P. § 2143.01. Accordingly, for this additional reasons, the instant claims are not obvious over De Marco in view of Reich.

For at least these reason, the Examiner has failed to establish a *prima facie* case of obviousness, and Applicants respectfully request that the rejection be withdrawn.

#### **CONCLUSION**

In view of the foregoing remarks, Applicants respectfully request reconsideration and reexamination of the pending claims and the timely allowance of the pending claims.

The Office is invited to contact Thalia V. Warnement at (202) 408-4454, if any matters may be resolved by a telephonic conference.

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Please grant any extensions of time required to enter this response and charge  
any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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